Title (en)

Fuel-Injection system for engine and process for defining the beginning of pressure drop in common rail

Title (de)

Kraftstoffeinspritzsystem für Motor und Verfahren für das Definieren des Anfanges des Druckabfalls in einer Verteilerschiene

Title (fr)

Système d'injection de combustible pour moteur et procédé pour définir le début de la chute de pression dans un rail accumulateur

Publication

EP 0969196 B1 20050316 (EN)

Application

EP 99305116 A 19990629

Priority

JP 18421098 A 19980630

Abstract (en)

[origin: EP0969196A2] A fuel-injection method and an apparatus therefor are disclosed, in which an output timing of a injection command signal is decided in such a manner that a fuel-injection timing is in matching with a basic desired injection timing, thereby to help ensure the improvement in the exhaust gases performance and the like of the engine. The invention is comprised of the steps of filtering waveforms of the detected common rail pressure thereby to obtain pressure data, calculating an approximate straight line Ld by making use of the pressure data, spanning from a preselected time to a time T3 of at least the first smallest value after the start of the pressure drop in the common rail pressure, and defining a time, at which a difference between a pressure data and an approximate straight line Ld is the largest value, as the timing T2 of the start of the pressure drop in the common rail pressure. Based on the time T2, a time lag DELTA Td is calculated, that spans from an output timing T0 of injection command signal to a fuel-inject-ion timing T1. The output timing T0 of injection command signal defined at a time of going backwards by the time lag DELTA Td from a basic desired injection timing Td, whichis obtained in accordance with the engine operating conditions. <IMAGE>

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F02D 41/401 (2013.01 - EP US); F02D 41/3845 (2013.01 - EP US); F02D 2041/1432 (2013.01 - EP US); F02D 2041/2055 (2013.01 - EP US); F02D 2200/0602 (2013.01 - EP US); F02D 2250/04 (2013.01 - EP US); Y02T 10/40 (2013.01 - EP US)

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CN108869076A; CN105324565A; EP1146218A3; CN100357584C; EP1548262A4; CN102959220A; CN103670862A; FR3092143A1; CN113302391A; US7267106B2; US9353698B2; WO2014202201A1; WO2020157072A1; WO2011161000A1

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